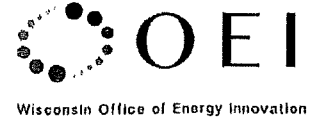
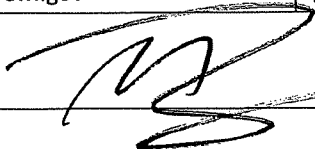




Public Service Commission of Wisconsin Office
of Energy Innovation
Critical Infrastructure Microgrid and
Community Resilience Center Pilot Grant
Program



ATTACHMENT A - COVER SHEET

SECTION I - Provide information summarizing the project proposal.				
Project Title:		City of Eau Claire Water Treatment Plant Microgrid Feasibility Study		
PSC Grant Request (\$):		Applicant Cost Share (\$):		Project Total (\$):
\$30,000		\$2,006		\$32,006
Choose one Eligible Activity				
<input checked="" type="checkbox"/> Critical Infrastructure Microgrid Feasibility Study Level 1 and 2		<input type="checkbox"/> Critical Infrastructure Microgrid Feasibility Study Level 3		<input type="checkbox"/> Community Resilience Center Feasibility Study
SECTION II - Provide information for your organization, signatory, and primary contact for the project.				
Applicant Type:		<input checked="" type="checkbox"/> City <input type="checkbox"/> Village <input type="checkbox"/> Town <input type="checkbox"/> County		
<input type="checkbox"/> Tribal Nation		<input type="checkbox"/> Wisconsin Technical College System		
<input type="checkbox"/> University of Wisconsin System		<input type="checkbox"/> K-12 School District		<input type="checkbox"/> 501(c)(3) nonprofit
<input type="checkbox"/> Municipal Utility (water, wastewater, electric, natural gas)			<input type="checkbox"/> Hospital (public or nonprofit)	
Name (on W-9):		City of Eau Claire (39-6005463)		
Address (on W-9):		203 S. Farwell St., Eau Claire, WI 54701		
County or Counties Served by Project:		Eau Claire and Chippewa Counties		
DUNS Number or CAGE Code:		0204951560000		
NAICS Code:		925120 (Planning) & 221310 (Water Treatment Plants)		
Authorized Representative/Signatory (Person authorized to submit applications and sign contracts)			Primary Contact (if different from Authorized Representative)	
Name:	Renee Tyler		Name: Ned Noel	
Title:	Community Services Director		Title: Senior Planner	
Phone:	715-839-5045		Phone: 715-839-8488	
E-mail:	Renee.Tyler@eauclairewi.gov		E-mail: ned.noel@eauclairewi.gov	
Signature of the Authorized Representative				

City of Eau Claire

Water Treatment Plant Microgrid Feasibility

Summary of Project Budget				
Line	Description	PSC Grant Request	Applicant Cost Share	Total Project Cost
1	Personnel		\$1,333	\$1,333
2	Fringe		\$674	\$674
5	Travel			\$0
6	Contractual	\$30,000		\$30,000
7	Other			\$0
8	Indirect			\$0
Totals		\$30,000	\$2,006	\$32,006
% of Total		94%	6%	

Applicant Comments: Enter budget information into the gray fields of the Summary Project Budget. Fields are formatted to display whole numbers. This document is formatted to print on 8.5"x11" paper. Include it as directed in your PDF application. Definitions of each line item are provided on the Definitions Tab. (Use this space to add additional budget information.)

**Public Service Commission of Wisconsin
Office of Energy Innovation
Critical Infrastructure Microgrid &
Community Resilience Center
Pilot Grant Program**



Water Treatment Plant Microgrid Feasibility Study



Due August 6, 2021 12:00 p.m. Central Time

3. APPLICATION CONTENT

3.1. **Application Cover Sheet** (See Attachment A)

3.2. **Application Budget Sheet** (See Attachment B)

3.3. **Application Narrative** (Below)

- **Project Description.**

The City of Eau Claire's [Water Treatment Plant](#), located at 2711 Riverview Drive Eau Claire, WI 54703, has been serving the public since 1952. See the site aerials for location. As of 2020, there were 27,956 customers the plant serves spread out not only in the city, but in adjacent townships that have water access. The plant has 16 operating wells, treats and pumps approximately 3.5 billion gallons of water each year. The plant pumps on average 9 million gallons per day (MGD). Safe and potable drinking water is absolutely critical to the livelihoods and businesses our local government serves.

The proposed project is needs-based and will focus on meeting the 9 MGD per day requirement from the DNR (see their support letter for the State Code requirements). Because our electric utility Xcel Energy removed a second substation feeder to the plant, critical redundancy was lost. The City can utilize a three-day supply of water in our elevated storage reservoirs across the city, but the DNR is requiring by end of 2024 that the City installs this emergency backup generation.

The initial focus was to install medium voltage diesel generators to meet the DNR code of being able to pump an average day of water. After a solar feasibility study was completed for the plant in 2018, staff realized a microgrid could potentially optimize public investments. This grant would thus fund an important feasibility study to ascertain if a microgrid could serve a greater public, economic and environmental benefit.

These motivations are driven by the City's [Strategic Plan](#) (#1 support economic prosperity, and #2 provide safe, functional, accessible and sustainable infrastructure). Meeting the adopted goals of 2050 carbon neutrality for the municipal operations and city at-large are additional key factors that will influence the project.

The study will examine a set of technologies including backup generators, battery storage, solar photovoltaic and microgrid controls. This arrangement will be studied for individual pros and cons (practicality, fiscal, environment, resiliency) to understand if the investments will maximize the plant's need to meet the DNR requirement along with optimizing the plant's operations. For example, we already to a certain degree realize that a larger solar array could shave peak energy demand during high pumping scenarios (public watering lawns on a hot sunny day), but do not well understand how best to store excess generation in batteries to be used for additional savings and resiliency. The study can help us understand the scenarios when the batteries should be leveraged and if they can offset the need for a second carbon-emitting generator. If this is found possible, we can reduce our carbon emissions but still provide the resiliency needed. The study would further help us understand the security risks involved in the technological solutions. For example, it is ideal to us that no other entity associated with the technologies can control any part of the plant's operations.

- **Reference Materials List.**

- Site Aerial Maps (2 pages)
- Solar Feasibility Study (5 pages)
- Letters of Support (5 pages)

3.4. Merit Review Criteria

3.4.1. [Activities 1 and 2 Only]. Identification of Critical Infrastructure.

As noted above, the City's water treatment plant serves close to 28,000 customers and must supply 9 million gallons of water daily. This critical infrastructure facility serves over 70,000 residents. Individual customer classes include 25,099 residential, 2,523 commercial, 106 industrial and 228 public accounts. The DNR auxiliary requirement in NR 811.27 illustrates the importance of this facility to our community. Without treated water supplied to the public, lives are at risk and businesses that depend on this resource face substantial economic lost. Thus, the value of this critical service is priceless. Enhanced resiliency is being mandated by the DNR in case of power outage due to weather or other cause. The feasibility study must clearly conclude that a microgrid solution will not hinder the plant to do its job and serve the public. A safe drinking water supply shall not be sacrificed for the sake of innovation.

3.4.2. Key Partners and Stakeholders.

Partners and stakeholders in this project include the City of Eau Claire as building owner and operator, Xcel Energy as electricity provider, and the DNR as regulator in requiring the backup power needed, the TBD consultant firm to conduct the feasibility study, and of course the rate payer customers this project serves. The City's Water Utility has recently raised water billing rates significantly due to past upgrades at the plant and on water lines. We are very conscientious about the costs involved in this project and other system improvements we need to make near-term. These costs are passed onto our rate paying customers, of which those on fixed income or living in poverty may experience a greater burden.

Letters of support are attached from Xcel and the DNR, whom both support this microgrid investigation. As Xcel's letter indicates, we have a strong partnership with them. Their Wisconsin and Michigan headquarters is located in the city so we work together often on mutual interests like essential services, climate change, community solar and economic development.

Xcel is a forward-thinking investor-owned utility company and is the State's number one provider of renewables. They recently obtained PSCW approval of a Resiliency as a Service (RaaS) product. The City supported their application to the PSCW with a letter of support. We know these innovations are needed in the utility marketplace as we had this water treatment plant microgrid project in mind. In fact, one of their regulatory rate designers of this product serves on the City's Sustainability Advisory Committee, demonstrating how closely we work together. Xcel states their RaaS program is technology agnostic, meaning the services and resiliency technologies provided will be catered to specific customer needs. They have sought through a RFQ ([useful program description link](#)) a select list of firms/vendors/suppliers to provide these turnkey solutions.

The City and our TBD consultant will engage Xcel as we work on the feasibility study to determine how they may play a role beyond the electricity service provided, and how RaaS may be leveraged. For example, it become clear that it is preferable to the City and partners that the battery asset be owned

and operated by the utility's selected firm. Advantages may include lower costs to the city, improved power quality (kVar, frequency, and voltage response), the owner capturing the investment tax credit, and dispatchable energy or grid balancing for Xcel.

3.4.3. Project Resilience Objectives and Metrics.

Critical Water Supply. This foremost resiliency objective is to provide at least 9 MGD of water to the public. Whether or not the feasibility study concludes a microgrid is advantageous, this DNR requirement must be met by the end of 2024.

Backup Power. This resiliency objective is mainly tied to the above outcome required by the DNR. Beyond this, the study may conclude the generator(s), controls/sensors, and battery(ies) can provide seamless uninterruptable backup, during routine maintenance service shutdowns, and 2-4 hour power during short outages. The generator may also provide black start capabilities for the plant and grid. These measurables will be outlined in the study.

Renewable Energy. The previous 2018 solar photovoltaic study concluded a 600kW ground mount array could supply the plant with about 13% (780,300 kWh annually) of renewable energy. The microgrid study would seek to "right-size" this investment for the co-benefits we seek.

Energy Savings. An important co-benefit would be to reduce operating costs by utilizing the solar plus storage to shave peak demand costs. This value is TBD but from 10 a.m. to 2 p.m. the site's 15-minute demand baseline is ~500 kW ac or 600 kW dc.

Carbon Reduction. The study will demonstrate the carbon emissions that can be reduced by the optimal size of the solar array (potentially 553 metric tons of CO₂e annually based on 780,000 kWh), along with possibly lessening the amount of fossil fuels used in the backup generator aspect.

3.4.4. Evaluation of Site-specific information.

See the site aerial maps and photovoltaic study maps for the location, constraints and opportunities. As the property is very close to the Chippewa River, there are both the 100- and 500-year floodplains to account for. Any solar, generators, and battery self-generation assets located on the ground must meet the National Electric Code (NEC) electrical datum plane which is 2' above the 100-year flood elevation. We do not anticipate these challenges being a problem, but the study will help us to determine where and how to construct the equipment to meet the NEC. For example, if the open field in front of the plant is best, the ground mount footings, solar panel racking, micro inverters and disconnect height will need to meet the NEC. Plant rooftop space is limited for large solar and other areas are wooded or have buried water lines from the pump stations so these locations need to be carefully considered.

Permitting will require local building and electrical permits, along with Xcel Energy interconnection permitting for the distributed energy resource. DNR compliance and plan approval will be needed with meeting NR 811.27 Auxiliary power upgrades. Any existing equipment upgrades in light of the microgrid will also need to be understood with the electrical service, switch gear, transformers, security, internet network, etc. Utilizing Xcel's new RaaS product remains to be seen, but will require contracts if we opt to partner.

3.4.5. Technologies under consideration.

As already mentioned, this project scope will consider diesel generators (possibly natural gas), solar photovoltaics, battery storage, and microgrid controls. We believe this combination may be the best solution to meet the pumping needs required and optimize the plant's operation while reducing its carbon impact. We are open minded to other solutions or arrangements that may arise in the feasibility study, however. We do not have at this time concrete emissions profiles, fuel costs, or operating and maintenance assumptions since this will be covered in the study.

3.4.6. Cost Match.

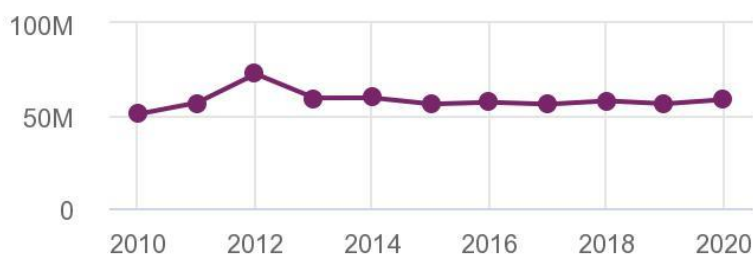
The total cost of the study is estimated at \$30,000 after obtaining a preliminary quote from a possible microgrid consultant. City staff have been considering this solution for a couple of years and have put a lot of background thought into the possibility. Further in-kind staff time during the study is included in the amount of \$2,006. The total project grant amount is therefore \$32,006. Please see the Budget Worksheet Attachment B. Primary staff members working on this study include the Water Treatment Plan Supervisor (6 hours), the Utilities Engineer (10 hours), and Senior Planner (20 hours). The in-kind staff match was calculated by determining hourly wage rates and hourly fringe rates. Fringe encompasses health insurance, WRS retirement benefits at 6.75%, FICA at 7.65%, and life insurance.

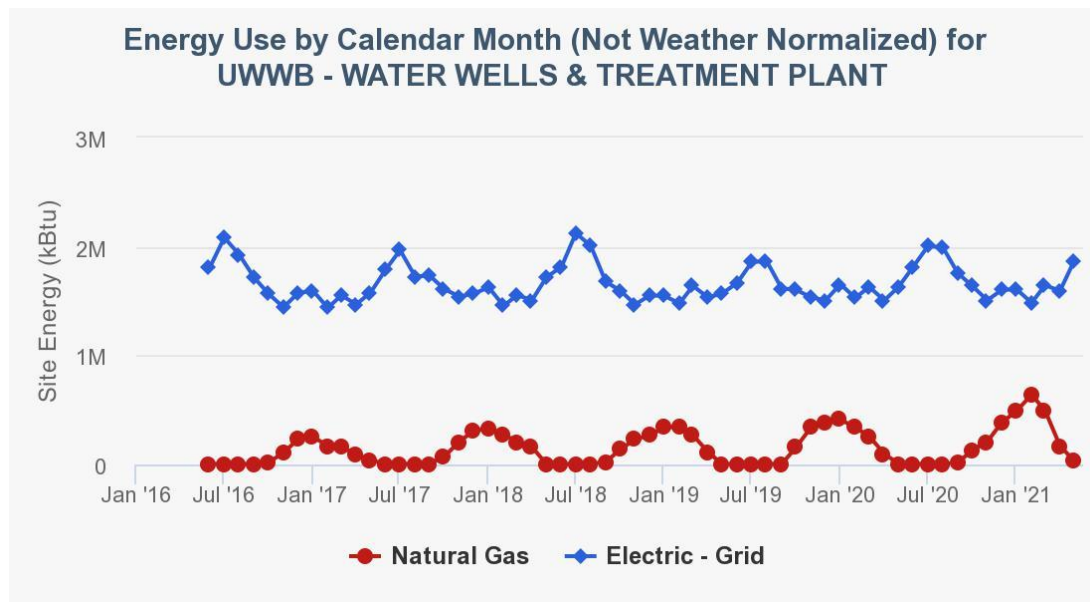
Without the microgrid study the City does not have enough information to move forward on this possible solution. Separate infrastructure funding at \$3.9 million has already been allocated in the City's Capital Improvement Plan (CIP) for solar (\$1.15 million) and the backup generation (\$2.75 million) in 2022-2023. These costs, benefits and tradeoffs however have not been studied in light of pairing them together with a microgrid solution that includes batteries. The study will reveal if the solution is feasible and if the CIP funding is adequate or needs to be adjusted.

3.4.7. Data Collection Plan.

The data collection plan includes site auditing information, analysis of technological options, utility bill data, Energy Star Portfolio Manager (Property ID: 2301667) access to historic energy and cost data (see chart samples below), 15-minute interval data from the plant's sub-meter, ideal sizes for solar, batteries, and the backup diesel generator. All of this data will be available to the consultant and the study will be completed during the performance period ending June 30, 2022.

Source EUI Trend (kBtu/ft²) for UWWB -
WATER WELLS & TREATMENT
PLANT





3.4.8. Systems Sizing Analysis.

At this time project cost estimates and financial projections, critical load, back-up duration, maximum period to replenish diesel fuel supply, controls strategy, island-ability are unknowns. The feasibility study will confirm these needs. System sizing analysis will be performed to understand what is most advantageous for the plant and microgrid arrangement. As noted above, we have already studied a 600 kW system for solar but this will need to be reexamined in light of the microgrid and 2 to 4 hour minimum battery storage.

3.4.9. Financial Analysis (including cost/benefit analysis, financing options).

The feasibility study will provide the cost/benefit analysis and financing options for the technological solutions along with possible stimulus to the economy. An important part of the study will examine how the solar and storage can shave peak demand energy use and cost. Xcel Energy will have interest in this as the plant's electricity load is large and we currently shave peak by manual operations.

3.4.10. Environmental Impact.

After the wastewater treatment plant, the water treatment plan is the City's second largest consumer of energy. In 2020, the plant used 5,939,609 kWh costing \$867,055 and 18,721 Therms costing \$11,224. Thirty percent of the electricity supplied to the plant via the local grid (from Xcel) is considered renewable so subtracting that equals 2,946 metric tons of CO₂e indirectly emitted/purchased. Natural gas used at the plant directly emitted 99 metrics tons. The plant's total in 2020 was thus 3,045 metric tons of CO₂e. As noted, a 600 kW on-site solar system could eliminate 553 metric tons of CO₂e annually based on a 780,000 kWh projection. This would be a substantial reduction in our carbon impact.

The CO₂e of the backup diesel generation will be determined and may be lowered due to utilizing the solar plus storage solution. In order to provide the pumping horsepower, a diesel generator or perhaps a natural gas-fed solution is needed. These polluting generators will not operate often but only when needed such as with the required backup.

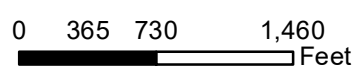
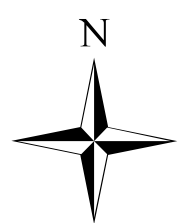
Some technological solutions like renewable hydrogen are not commercially available but our partner Xcel Energy is exploring it with a pilot in Minnesota. If new information comes to light during the study we can consider it working with Xcel. The microgrid controls/sensors will also help us to understand when to direct the use of these technologies for optimal energy, cost and carbon savings. These technologies to be studied, appear to be the most beneficial to meet the required daily pumping average resiliency need, while also working towards our 2050 carbon neutral goals.

3.5. Reference Materials.

- Site Aerial Maps (2 pages)
- Solar Feasibility Study (5 pages)
- Letters of Support (5 pages)

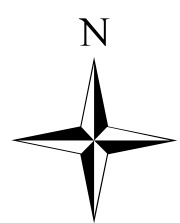
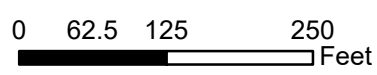


Aerial Map Water Treatment Plant





Aerial Zoom Map Water Treatment Plant



Eau Claire WI
City and County
Technical Solar PV Site Review

Niels Wolter
Madison Solar Consulting
April 2018

Disclaimer

The information presented here provides a feasibility study level overview of solar PV projects siting, sizing, generation, site electricity use offset, pricing and project economics. It should not be used as the only source of information.

While Madison Solar Consulting/Niels Wolter LLC strives to provide the best information possible, we make no representations or warranties, either express or implied, concerning the accuracy, completeness, reliability or suitability of the information. Niels Wolter LLC disclaims all liability of any kind arising out of your use or misuse of the information contained in this document.

Water Treatment Plant

2711 Riverview Drive

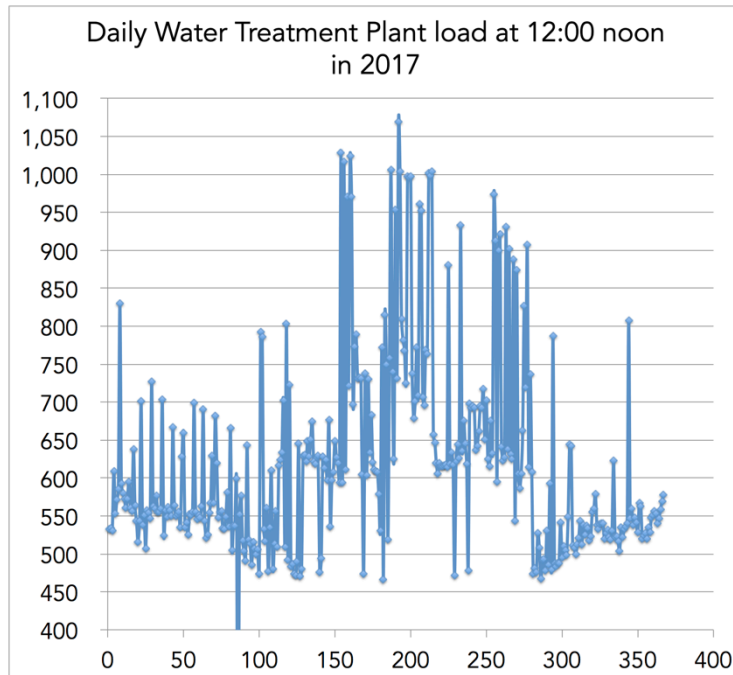
Site, location of electric room noted by the red X (photo Google).



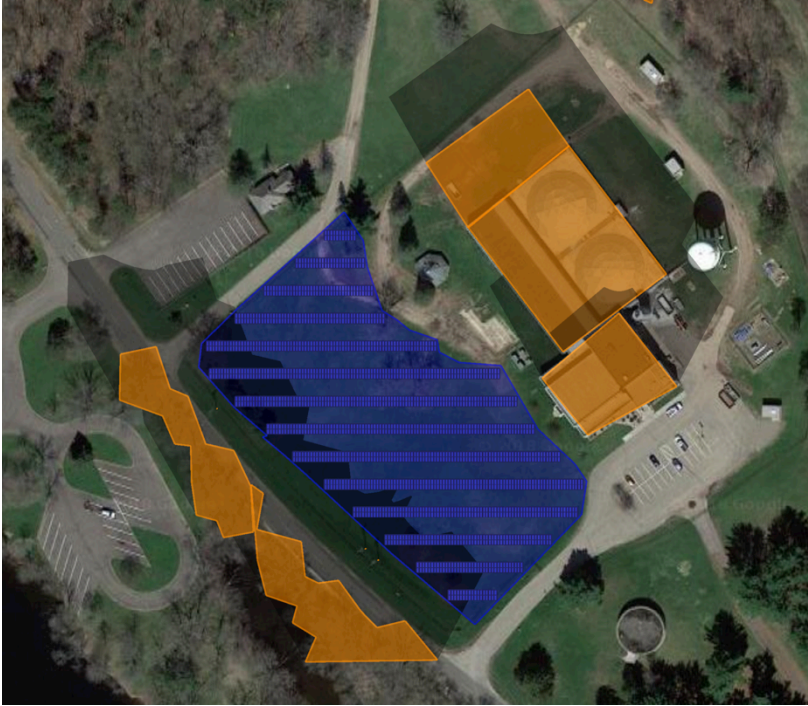
Annual electricity use (kWh/year)	5,791,300 (2015 – 2017 data)
Xcel electric rate current	Large General TOD
Xcel electric rate after solar installation	Large General TOD
Recommended site options for array	Open ground areas around the plant (with tree removal), or Currently forested areas near plant
Maximum system size (kW dc)	600
Array size rationale/limitation	From 10 am to 2 pm the site's 15-minute demand baseline is ~500 kW ac or 600 kW dc

Annual solar generation (kWh/year)	780,300
Shading, snow and soiling	8.9%
kWh/kW dc	1300
Solar share of site's annual use	13%
Site concerns	<p>Trees, power poles and lines.</p> <p>Significant underground utilities, water pipes, power lines</p> <p>Several trees around the array will need to be removed</p> <p>Site is in FEMA "without base flood elevation" and "regulatory floodway" flood hazard zones</p>
Expansion plans	Another "dome and accompanying bldg. area 90 feet NW of current site
Electric meter(s)	Site has two electric meters, one is unused, could perhaps net meter 100 kW ac on that meter... but the meter would also need to show some electricity use.

Graph of the Site's 2017 Daily Demand (kW) at 12 Noon. A 500 kW ac PV system would only rarely be more than the site uses, particularly during the peak solar days (roughly day 120 to day 230).



Helioscope image of the Water Treatment Plant 600 kW dc PV Array. Objects throwing shade are noted in orange. Trees in the south, southeast and southwest of the array area and in the array area, not marked in orange are assumed to be removed.



FEMA Map Showing the Flood Areas





July 22, 2021

Cole Cloutier (Utilities Engineer)
Eau Claire Waterworks
1040 Forest St
Eau Claire, WI 54703

FILE REF:
PWS ID#: 61802301
Eau Claire Waterworks-MC
Eau Claire WI
Eau Claire County

Subject: Eau Claire Waterworks Auxiliary Power Summary, DNR Code Requirements, and State PSC Grant Support Letter for Eau Claire Waterworks Microgrid Feasibility Study

Dear Cole:

The department understands that the city of Eau Claire Waterworks is pursuing an auxiliary power upgrade and applying for a Public Service Commission (Office of Energy Innovation) microgrid grant. The DNR is in support of the utility performing upgrades to the auxiliary power to meet current code requirements while conducting this microgrid feasibility study. The study may conclude it is economical to pair required DNR backup power with solar, battery storage, and controls to optimize the plant's resiliency, energy efficiencies, and reduced fossil fuel greenhouse gas emissions. The DNR is willing to consider these solutions that maximize public investment while still meeting current code requirements that apply to the Waterworks. They include the following:

Current DNR code requirements that apply to Waterworks auxiliary power includes the following:

NR 811.27 Auxiliary power. All municipal pumping stations, pumphouses, and water treatment plants shall have a standby auxiliary power source unless the department determines that there is sufficient pumping capacity with existing auxiliary power located at other water system facilities to provide at least an average day supply of water. Sufficient power shall be provided to operate pumps, treatment systems, chemical addition, control systems, and monitoring equipment. Auxiliary power for chemical addition, treatment, and monitoring equipment is not required if the treatment, chemical addition, control, and monitoring equipment is not necessary to meet the primary drinking water standards in ch. NR 809 or the continuous disinfection requirements of chs. NR 810 and 811.

(1) Power sources. Standby power may be provided by any of the following:

(a) A dedicated on-site generator or engine. A dedicated on-site generator may be located inside or outside the building. Dedicated on-site engine-generator sets installed within the building shall be located in a separate room. Diesel fuel tanks shall be provided with secondary containment and interstitial leakage monitoring and the installation shall receive written approval from the department of safety and professional services or its authorized agent under ch. ATCP 93 prior to installation. All fuel lines shall be exposed above grade. Water lines to water cooled units shall be provided with backflow prevention in accordance with s. SPS 382.41.

(b) A portable power source owned by the municipality and dedicated to the water supply facility operation.

(c) A portable power source not owned by the municipality but only if the water system owner obtains a written agreement with the owner of any portable power source, including tractors or trailered engine-generator sets, that requires the water system owner to have primary access to the power source in an emergency and that allows the portable power source to be brought to the water system as required for

testing. The portable power source should be located in the community if possible but shall be located within 10 miles of the water system facilities at which it will be used.

Note: The department recommends the use of water system owned dedicated on-site or portable engine-generator sets in all cases. It is recommended that the equipment necessary to convert natural gas fueled engines to propane be maintained on site in case the natural gas supply has to be shut off for any significant length of time. It is recommended that exterior engine-generator set installations be installed within a locked security fence.

AND:

NR 810.13 System maintenance. Each water supplier for all public water systems shall perform routine maintenance to ensure proper operation of the public water system. Record keeping shall be established to ensure proper scheduling.

(1) Each water supplier for community and nontransient noncommunity water systems shall perform all of the following:

(d) *Emergency power exercising.* Emergency generators and auxiliary engines shall be exercised a minimum of once per month and quarterly under full load. A log shall be kept that documents when the unit was operated and maintenance that was performed on the unit. Water suppliers for those public water systems who rent, lease or borrow their generators shall have a contract with the owner of the unit, perform full-load exercising at least annually, and keep records showing when exercising was performed. Water suppliers for those public water systems with right angle units requiring mobile tractors shall perform full load exercising at least annually and keep records showing when exercising was performed. Operational and fueling procedures shall be included in the log.

All NR code references above are Wisconsin Administrative Natural Resource Code.

Currently a summary of Eau Claire Waterworks auxiliary power as understood by the department is the following:

Currently the water utility treatment plant can be powered by a 480-cc generator but only has the ability to power one lift pump. This creates a water plant pumpage of only 4 MG (million gallons) that can be pumped. Thus, this limits the facility pumping capacity in a power outage. The entire plant is served by two lines with one substation from Xcel. It used to be served by two substations, but Xcel Energy removed one of them 4-5 years ago. This does not increase the water plant limiting pumping capacity of 4 MGD (million gallons per day) in the event of a power outage.

For well pumpage to the treatment plant the city has three wells Well 6, Well 12, and Well 13 that would be powered by the 480-cc generator allowing for an estimated pumpage of 5.5 MGD to the treatment plant when pumping 24 hours. Additionally, Well 18 has a pig tail auxiliary power hook up compatible with a portable generator from the wastewater treatment plant. This well can provide for an estimated 2.8 MGD to the treatment plant when pumping 24 hours. Well 21 has a right-angle drive unit that is compatible with a tractor PTO and can provide for an estimated 1.1 MGD to the treatment plant when pumping 24 hours. In a power outage the Wells 8, 9, 11, 14, 15, 16, 17, 19, 22, 23, 24 and the air stripper are not available. Due to primary drinking water standards and DHS health recommendations (manganese and potentially PFAS) these Eau Claire city wells would still require treatment in a power outage and thus this does not increase the water plant limiting pumping capacity of 4 MGD in the event of a power outage.

Based on PSC reporting data from the past 3 years (2020,2019,2018) the Eau Claire Waterworks average day is about 9 MGD and max day 16 MGD. Currently auxiliary power only provides for only 4 MGD when code requires a minimum 9 MGD required. This is considered a non-conforming feature and/or deficiency that the department may incorporate into the next sanitary survey with a proposed corrective action schedule if not completed by the utility. The next sanitary survey is expected to take place in 2023. The department understands the utility was in the process of evaluating said upgrade at the 2020 sanitary survey.

Thus, the department recommends moving forward with planned upgrades to meet code requirements and the department may require it in the future.

Auxiliary power upgrades will require DNR plan approval. Again, the department is also supportive of the city studying this microgrid grant solution to meet code requirements while providing additional public and environmental benefits.

Thank you for your attention to the above matter. Please feel free to contact me at 715-928-1624 or corey.larson@wisconsin.gov if you have any questions related to this manner.

Sincerely,

A handwritten signature in cursive script, reading "Corey D. Larson". The signature is written in dark ink and is positioned above the typed name.

Corey D. Larson P.E.
Water Supply Engineer
Department of Natural Resources

Encl.

cc: Bureau of Drinking Water/Groundwater – DG/5 (e-copy)
Troy Stapelmann, Eau Claire (e-copy)
Baldwin Office File- Eau Claire Waterworks
Cole Cloutier-Eau Claire Waterworks

August 4, 2021

Public Service Commission of Wisconsin
Office of Energy Innovation
Hills Farms State Office Building
4822 Madison Yards Way
Madison, WI 53705

Re: Critical Infrastructure Microgrid/ Community Resilience Center Grant

Dear Office of Energy Innovation:

On behalf of Xcel Energy, I am writing to express support for the City of Eau Claire's (City) application for a "Critical Infrastructure and Community Resilience Center Pilot Grant" to be used toward funding their Water Treatment Plant Micro-Grid Feasibility Study.

In 2010, the City was at the forefront of Wisconsin communities as it announced a vision to reduce its carbon footprint, and to use 25% renewable electricity by 2025, which they've already met. With a continued focus on clean energy, they announced in 2018 a pledge to use 100% renewable energy and become carbon neutral by 2050.

As the Wisconsin's largest provider of renewable energy, Xcel Energy is on pace to serve customers with 80% carbon free electricity by 2030 and has a goal to be 100% carbon free by 2050. Understanding the importance of these mutually beneficial goals, the City and Xcel Energy signed an "Energy Future Collaboration" Memorandum of Understanding in 2019 formally outlining a partnership to support the energy-related goals and initiatives.

As a piece of that overall agreement, the City became the first community in Wisconsin to participate in Xcel Energy's award-winning "Partners in Energy" program, which assists communities in developing and implementing community driven energy action plans. With a goal of developing a comprehensive Renewable Energy Action Plan (REAP), a diverse steering committee of stakeholders developed a plan that is actionable and outlines the objectives, timelines and resources required to address climate change and meet the needs of the community. On the heels of the REAP, the City also engaged Xcel Energy to develop an Electric Vehicle (EV) Community Roadmap; a first of its kind in Wisconsin and for Xcel Energy. Both plans have now become models other communities can learn from throughout Xcel Energy's eight-state service area.

As another step in the Energy Future Collaboration, the City and Xcel Energy have identified the company's Resiliency as a Service (RaaS) product to be potentially beneficial to the City. The program was approved by the Public Service Commission of Wisconsin as the state's first program to support microgrids and other resiliency projects for large business customers and government entities who require a higher than standard service reliability. The DNR requires the City to provide back-up for their water treatment plant, and our RaaS program appears to offer benefits of both resiliency and renewable energy options from a microgrid.

Xcel Energy commends the PSCW/OEI in offering this funding opportunity to the public and private sectors to focus on innovative pre-disaster mitigation through critical infrastructure microgrids and other resilient building strategies by studying the feasibility of the deployment of distributed energy resources (DERs) and appropriately sized storage, along with a grid-interactive controls schema. We strongly believe that the City of Eau Claire's application for this grant to be used toward funding their Water Treatment Plant Micro-Grid Feasibility Study meets the requirements and are excited about the opportunity it would provide to the City in studying how resiliency options may be implemented for the community.

Sincerely,

A handwritten signature in black ink that reads "Brian Elwood". The signature is written in a cursive, flowing style with a large initial 'B' and 'E'.

Brian Elwood
General Manager, Customer and Community Service
Wisconsin and Michigan